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CANADA LIFE ASSURANCE COMPANY

Suggestions
for
Medical Examiners

Toronto, May, 1903

Suggestions for Medical Examiners.

Before conducting examinations the attention of the Examiner is called to the following suggestions : The Medical Directors do not wish to be understood as attempting to teach Examiners in matters pertaining to their profession, but rather to remind them of points specially bearing upon life assurance.

It is now generally conceded that the success of a Life Assurance Company depends in a great measure on the ability and integrity of its Medical Examiners. The most capable financial management, the most energetic business ability in other departments may be entirely neutralized unless the risks are carefully selected. Much, therefore, depends upon an accurate statement of facts and wise judgment thereon to enable the Company to make a proper selection of lives. To aid the examiners in this is the object of these suggestions.

The relation of the Medical Examiner to the applicant differs a good deal from that of the physician to his patient. While the patient will voluntarily tell, and even magnify, his ailments and infirmities, concealing nothing, in the case of a candidate for life assurance it is often quite different. His attitude is even one of antagonism ; he believes he is sound, a good risk, and resents the close questioning to which he is subjected ; is inclined to lessen and even suppress any defect of the past. Hence the necessity for an able and faithful Examiner to be on the alert to detect any deception on the applicant's part ; to see that full, fair answers are given to all questions, and to let nothing prevent him in giving a fair and candid opinion to the Company.

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In endeavoring to report on the desirability of a risk it is not only essential to know that the applicant is free from disease, but from any tendency to disease; that he is a sound life. The Company should have the benefit in all doubtful cases. It is far better that the risk should be refused than that the Company take a doubtful risk; yet no one should be refused life assurance if he is deserving of it. In some cases the Medical Examiner may feel that he would like to confer by letter confidentially with the Head Office; there may be something that it is desirable for the Head Office to know which cannot be written judiciously on the examination form pertaining to the applicant's physical or mental state, or to his habits, mode of living, environment, etc. The Medical Directors are always glad to receive any such communication to enable a just decision to be given, but would ask that such letter be sent *at once*—not delayed while the Doctor has it in his mind to write, but does not do so. There is a special confidential form of the Company for this purpose.

Medical Examiners.

The relation in which a Medical Examiner stands to a Life Assurance Company is of a strictly confidential nature, and being responsible for the character of his report to the Directors, independent of Agents, he should guard with peculiarly jealous care the interests of the Company, feeling bound by personal and professional honour to discharge his duties with the utmost fidelity.

Medical Examiners are selected by the Company for their moral as well as professional standing in the community, and are not dependent upon the agents for their appointment or dismissal.

A Medical Examiner who removes from the district to which he has been accredited forfeits his appointment. He may, at the discretion of the Company, be reappointed for the district to which he has removed, provided there is a vacancy at that point.

A Medical Examiner who has not been regularly appointed will, immediately upon receipt of his report at the Head Office, be asked to complete the usual certificate, and if upon further inquiry and investigation his appointment should seem desirable, he will be notified thereof.

In endeavoring to elicit satisfactory answers to the questions in the form supplied to them, Examiners have often to tread on delicate ground, and much tact may be required in pressing for more definite information in order that their investigation may be thorough and complete. In a measure they act as detectives in trying to elicit with accuracy the history and habits, past and present, of the applicant.

They should endeavor to maintain cordial relations with both the applicant and the Agent, bearing in mind that Agents naturally look to the Medical Examiner for reasonable co-operation in a strictly medical capacity.

The following rules should be carefully observed :

1. If asked to make an examination, endeavor to keep such appointment *promptly*. Delay may cause loss to the Company, the Agent and the applicant.
2. The examination should be conducted without the presence of any third person, and as no interference by Agents is allowed by the Directors in such examinations, Medical Examiners are requested to report to the Head Office any interference or any attempt to influence their opinion.
3. If from any cause the Medical Examiner deems it desirable to transmit the report of the examination and his opinion direct to the Head Office, he is invited to do so, and to notify the Agent thereof.
4. The answers in the Medical Examiner's report must be entirely in the handwriting of the Examiner.
5. The Examiner must invariably date his examination at the time and place at which it is made.
6. The Company will not accept medical examinations

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made by a near relative, nor by one who has any pecuniary interest in the policy.

7. The Company objects to Examiners making examinations out of their own district, or of persons residing elsewhere. If such are made a full explanation for so doing must be given.

8. Questions in the Health Record and elsewhere should be met by a direct "Yes" or "No." Ditto marks and brackets will not be accepted. If the applicant has suffered from any of the diseases or conditions named in the Health Record, it is especially requested that full particulars—date, frequency, severity, duration of illness, etc., should be given under "Remarks," page 4. This is frequently neglected.

9. Answers as to Habits should be as precise as possible, remembering what an important bearing this has upon life assurance risks, avoiding the use of such terms as "Very moderate," "Very seldom," "Social drinker," "occasionally," etc. An average in amount and frequency regarding applicant's use of Wine, Spirits and Malt Liquor is asked for, and a definite answer expected. It is respectfully requested that Examiners will promptly notify the officers of the Company of any policyholder who may be violating the terms of the policy by vicious habits or otherwise in a way tending to shorten life. By compliance with this request unjust claims will be avoided.

10. Collateral Family History of uncles and aunts is required if the history of parents or grandparents is scant or unsatisfactory, or if there is evidence of hereditary taint, or if the applicant is under the age of 21.

11. A careful and capable Examiner will usually avoid doubtful terms in filling up the blank, as "change of life," "debility," "childbirth," "exposure," and the like, unless he can give such definite added information as will make it clear that such expressions are not just a cloak for tuberculosis or other hereditary disease.

12. The Medical Examiner should carefully review his

report, and make sure that every question is fully answered. It is very common to find one or more questions unanswered, and sometimes even the report unsigned, causing disappointment, delay and unnecessary work.

Medical Examination.

Family History—Personal History.—Both these are important factors. On these full and impartial reports are very necessary, more necessary than Examiners apparently think, for some have no hesitation in recommending for assurance those who have had parents or other near relatives die from tuberculosis or other constitutional disease, without the least qualification (apparently dwelling almost exclusively on the result of personal examination of the applicant, and recommending the risk entirely or almost so from it).

1. (a) **Family Health Report.**—It is often not possible to learn from the applicant the exact cause of death of some member or members of his family, but by careful inquiry the Examiner can usually make out the cause of death more or less exactly, determining, at any rate, if organic or hereditary disease was or was not present. It may sometimes be judicious not to complete the examination until ascertaining the true cause of death of some members of the family. A complete family record is desirable in most cases, but specially so if the applicant is under twenty-five years of age.

(b) Causes of death in immediate relatives (e.g., parents, grandparents, brothers, sisters) are always to be recorded. In cases of tuberculosis, insanity, epilepsy, gout, rheumatism, cancer, syphilis, etc., the duration and symptoms of the illness resulting in death should, if possible, be stated. If the illness was obscure, endeavor should be made to exclude tuberculosis in the case. Many cases of tuberculosis are covered up by vague terms such as childbirth, liver complaint decline, debility, etc.

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2. Personal Health—General Appearance.—Is there anything unfavorable indicating former sickness or cachexia of any kind? Is there any evidence of abuse of stimulants, remembering that intemperance perhaps is the most formidable enemy to safe assurance of lives? Does the applicant look as though he took care of himself, and has he a healthy appearance and power of resistance to disease? Has his occupation or environment had any injurious effect upon his health, or are they likely to do so? Is he erect or stooped, pale or florid? The first impressions of an applicant are often correct. Sometimes, though no definite lesion exist, the Examiner feels that the applicant does not seem to bear the strain of modern life well; the wear and tear is so great that, while many do leave their business cares in the office, many carry them home, their sleep is disturbed as a result, the digestion is also upset, and they do not promise to be long lived.

Height and Weight.—Few people know their own height and fewer still their weight. Both of these are important and should be measured to find their relation one to the other. Generally speaking the estimated height and weight given by an observant Examiner will be accepted, but when the weight approaches the maximum or minimum weight for height, measurements must be verified by scale and tape. If overweight effort should be made to find if this is a family characteristic, and if so whether it is associated with longevity. It is important to know if applicant has recently gained or lost weight, and if there has been a loss it should be carefully investigated, as frequently this is one of the earliest manifestations of tubercular disease.

The following Tables of Heights and Weights for Male and Female lives are in use by this Company and your attention is directed to them:

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AGES.		14-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69
Ft. 5	In. 0	98 120 144	100 125 150	103 128 154	105 131 157	108 133 160	107 134 161	107 134 161	107 134 161	105 131 157	
	1	98 122 146	101 126 151	103 129 155	105 131 157	107 134 161	109 136 163	109 136 163	109 136 163	107 134 161	
	2	90 124 149	102 128 154	105 131 157	108 133 160	109 136 163	110 138 166	110 138 166	110 138 166	110 137 164	
	3	102 127 152	105 131 157	107 134 161	109 136 163	111 139 167	113 141 169	113 141 169	113 141 169	112 140 168	112 140 168
	4	103 131 157	106 135 162	110 138 166	112 140 168	114 143 173	115 144 173	116 145 174	116 145 174	115 144 173	114 143 173
	5	107 134 161	110 138 166	113 141 169	114 143 173	117 146 176	118 147 176	119 149 179	119 149 179	118 148 178	118 147 176
	6	110 138 166	114 142 170	116 145 174	118 147 176	120 150 180	121 151 181	122 152 184	122 152 184	121 151 184	121 151 181
	7	114 142 170	118 147 176	120 150 180	122 152 182	124 155 186	125 156 187	126 158 190	126 158 190	125 158 190	125 156 187
	8	117 146 175	121 151 181	123 154 185	126 157 188	128 160 192	129 161 193	130 163 196	130 163 196	130 163 196	130 162 194
	9	120 150 180	124 155 186	127 159 191	130 162 194	132 165 198	133 166 199	134 167 200	134 168 202	134 168 202	134 168 202
	10	123 154 185	127 159 191	131 164 197	134 167 200	136 170 204	137 171 205	138 172 206	138 173 206	139 174 209	139 174 209
	11	127 159 191	131 164 197	135 169 203	138 173 206	140 175 210	142 177 212	142 177 212	142 178 214	144 180 216	144 180 216
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	1	135 170 204	142 177 212	145 181 217	148 185 222	149 186 223	151 189 227	150 188 226	151 189 227	151 189 227	151 189 227
	2	141 176 211	147 184 221	150 188 226	154 192 230	155 194 233	157 196 235	156 194 233	156 194 233	154 192 230	154 192 230
	3	145 181 217	153 190 226	156 195 234	160 200 240	162 203 244	163 204 245	161 201 241	158 198 238		

TABLE OF HEIGHTS AND WEIGHTS.

AT VARYING AGES—FEMALE.

Height.		Age 20.	Age 30.	Age 40.	Age 50.
4	Ft.				
	In.				
	9	100	105	110	118
5	10	108	108	113	121
	11	106	111	117	125
	0	109	115	120	128
5	1	112	118	124	133
	2	116	122	128	136
	3	119	126	132	140
5	4	123	129	136	145
	5	125	133	140	149
	6	130	137	144	153
5	7	134	141	148	158
	8	138	146	153	163
	9	143	150	157	167
5	10	147	154	162	172
	11	151	159	167	177
	0	156	164	172	183

Temperature.—This should be stated in every case, and is a guide to acute disease and is a warning in early tubercular disease.

Chest Measurement.—These are to be taken in all cases, not estimated. Some people more readily expand the chest than others, as athletes, because they know how. A little instruction will often elicit the true power of expansion. Three inches is a very usual expansion. If there be any pain caused on expanding the chest, the part where it exists must be noted and subjected to careful auscultation and percussion.

Abdominal Measurement.—The measurement of abdomen at the level of the umbilicus must always be reported. In cases of over maximum weight, a measurement of abdomen exceeding the chest on full inspiration is a large factor in determining the insurability of the applicant on the ordinary plan.

Examination of the Thorax.

The examination of the thorax should be made in a place free from noise so that the sounds of the heart and respiratory organs can be distinctly heard. It should be done leisurely

and composedly. Nothing should interfere between the stethoscope and the flesh in order to get the most accurate idea of the important organs beneath; this sometimes is hardly appreciated by Examiners.

Heart and Circulation.—The relation between the pulse and general condition is always important. A pulse below 60 in a young subject is a suspicious fact, and also if persistently over 80, even on favorable conditions. Remember that an irregular, accentuated pulse may develop in nervous persons during the examination by the fear that some latent disease will be found and vitiate the insurance. The ratio of one respiration to four beats of the pulse is a fair estimate in a healthy subject. Close examination of the arterial system should be made with special reference to degenerative changes, as shown by thickened radials, marked tortuosity and prominence of temporals, arcus senilis, etc. Careful examination of the heart involves observing that the heart occupies its normal position; any intermission or irregularity in its beat; whether the impulse is gentle or violent. Any bruit or altered sound should be carefully listened for. The apex beat is the most constant and conspicuous feature in the cardiac area, as well as the most significant, situated one and a half inches below and one inch to right of left nipple. The beat extends over an area about one inch square, and is formed in the main by a small part of the left ventricle. Any alteration of position should be noted and its cause explained. Should the apex beat be diffused, the point of pulsation farther to the left is to be regarded as the apex. In health there is no bulging over the præcordia. In the dorsal position no impulse is visible except, perhaps, apex beat. By disease of the valves and changes resulting therefrom præcordial bulging may follow. Increased impulse may be due to increased heart's action, the result of physical or mental excitement; also by the abuse of tobacco or stimulants, usually readily differentiated from those due to organic causes by resting quietly before a second

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examination is made and by noting the normal position of heart and its freedom from valvular disease.

The Lungs.—Respiratory diseases form so large a percentage of mortality that they warn us to make a careful physical examination of the chest, not only to detect grave mischief, but to ascertain if there is any catarrhal affection of the mucous passages, huskiness of voice, chronic affection of the throat, for people with such a condition often speak lightly of such symptoms and have a ready explanation for them. Any departure from the normal shape and movements of the chest should be noted. All cases should be carefully examined to see if any physical signs of disease of the lungs exists, but especially so in cases of asthma, chronic bronchitis, emphysema, or if the family history shows a tubercular tendency. Associated with this examination is the important one of hæmoptysis. It is only by careful examination and study that we learn in many cases to distinguish between those that are so severe as to be a decided impairment to the risk, and those that may be safely disregarded as coming from the nose or throat. In all cases the cause, the number of attacks, and if possible, the amount of the hemorrhage should be given. It is often said the bleeding is from the gums or throat, but this is not generally the most probable explanation.

Examination of the Abdomen.

In examining the Abdomen, the same methods as in the Thorax should be used, viz., inspection, palpation, and percussion. It may not be necessary to do this in every case in a complete manner, but when it is undertaken the shirt should be drawn up. Any irregularities denoting tumor or enlargement connected with the viscera or mesenteric glands should be observed. The region of the appendix, and, in the case of a female the ovarian region, should also be examined.

Digestive Organs.—Dyspepsia is sometimes an early stage of tuberculosis, or organic disease of stomach and kidneys.

It is important if chronic or frequently recurring. Pain in the abdomen—colic—may be renal, biliary, or due to an attack of appendicitis. Endeavor to locate the site of the pain, and give the number, date, duration and severity of the attacks.

Liver and Spleen.—The Liver can be examined while the applicant is standing for any evidence of tenderness or bulging. The situation is marked by percussion, usually it does not extend below the ribs. On the opposite side the spleen can be outlined.

Rectum.—If any suspicion should exist that disease of the Rectum was present, it should be examined after questioning to determine, if possible, whether hemorrhoids, cancer, or fistula exist; this part not being usually examined unless there seems to be good reason to do so.

Rupture.—If the applicant has a Rupture the Medical Examiner should satisfy himself that a suitable truss is worn; if the rupture is said to be cured, a careful examination should be made to verify this.

Genito-Urinary Organs.—The determination of the presence or absence of disease in these organs, which tend to shorten life, deserves special consideration at the hands of Medical Examiners in Life Assurance cases. If there is any suspicion of disease of Penis or Testicles, these parts should be carefully examined. Many Companies, in order to reach trustworthy conclusions, lay down guides or rules for conducting an examination of the urine in a uniform way. Statistics tend to show that even with all care a large proportion of unprofitable risks are through disease of the kidneys not discovered at the time of acceptance by the Company. This Company requires that the specimen of urine shall be passed in the presence of the Examiner, or that the Examiner shall give some evidence or satisfactory assurance that the specimen was that of the applicant. Applicants suffering from albumen or sugar have now and then fraudulently substituted normal urine for their own, and although

substitution of the urine is no doubt of infrequent occurrence, yet Examiners should be ever on the alert in this matter. The sample should be freshly voided and, if possible, after eating and exercise. If not a satisfactory one, it may be advisable to collect and mix that passed over a period of hours, and compare this so collected with a freshly passed specimen.

The Company requires in all cases a physical and chemical examination, thus :

Physical.—Color.—If light and watery looking, diabetes insipidus is suggested ; if reddish, excess of urates or blood, the former perhaps showing a rheumatic or gouty state and the latter perhaps indicating organic change.

Note transparency or opacity. If opaque is it due to earthy phosphates? A few drops of acetic acid will clear the sample. If this fails gently heat the upper layers of urine in a test tube, and the opacity, if due to amorphous urates, will clear ; if not, the opacity may be due to some cause such as pus or blood requiring microscopic examination.

Specific Gravity—1015 to 1025 is a sufficient range. Over 1025 suggests the possible presence of sugar ; if below 1015, of albumen.

Reaction—Test by means of litmus paper.

Chemical.—Albumen—If in large quantity any ordinary test will show it ; if in minute quantity great care is necessary to positively identify it, and give it its true significance. Heat in conjunction with Nitric Acid is a ready if not a very delicate test. A test tube of ordinary size is filled half-full of the suspected urine, and heat applied until boiling occurs throughout the whole. If a precipitate occurs, it consists of either albumen or earthy phosphates. A few drops of Nitric Acid is next added, and if the precipitate remains undissolved it is due to the presence of albumen ; if it disappears it consists of earthy phosphates, and the urine is free from albumen.

Ferro-Cyanic Test.—Fill an ordinary test-tube half-full of the urine, and to this add ferrocyanide of potassium solution (1 to 20) to the depth of about an inch; after mingling the urine and the reagent thoroughly by inverting the tube a few times, add a few drops of acetic acid and again invert the test tube a few times until the urine and reagents are well mingled. Finally, stand the tube in a good light and note any changes appearing. If albumen be present, in a half-minute or so a diffuse, milk-like turbidity will gradually appear throughout the test, more or less pronounced, according to the quantity of albumen present. If the reaction seems doubtful it will be found useful to stand another tube filled with the filtered urine beside the one containing the test for purposes of comparison.

Nitric Acid Test.—Upon a column of pure Nitric Acid in a test tube the suspected urine is gently floated, so that the column of urine and the acid are about an inch in depth. To do this, hold test tube in an inclined position; slowly deliver the urine along the inside of the tube so that the urine may flow gently down and overlie the acid. If albumen be present an opalescent zone will be observed at the point of contact between acid and urine, which becomes more or less pronounced according to the quantity of albumen present.

Purdy's.—Fill a test tube about half or two-thirds full of the filtered urine, and to this add about one-sixth its volume of saturated solution of chemically pure sodium chloride. Next, mingle the urine and sodium chloride solution by inverting the tube a number of times, and then add a few drops of acetic acid. Lastly, heat the upper third of the test over a spirit flame until it gently boils, and then stand the test in a good light for observation. If albumen be present, a white cloud, more or less dense, will appear in the upper, boiled portion of the test, while the lower unboiled portion will remain clear and unclouded.

Sugar.—Copper tests. Depending on the fact that in

strongly alkaline solutions, grape sugar reduces cupric oxide to lower grades of oxidation, the following tests are advised :

Trommers.—About a drachm of urine in an ordinary test-tube is mated with cupric sulphate solution to render the urine light green color ; then an equal volume of liquor potassæ is added. A blue precipitation of hydrated cupric oxide results, which dissolves on shaking the tube, forming a beautiful clear blue solution. Apply heat ; if sugar be present reduction takes place and the yellow, or yellowish red, suboxide results.

Haines' Formula.—Pure copper sulphate, 30 grains ; distilled water half an ounce, make a perfect solution, and add pure glycerine half an ounce. Mix thoroughly and add five ounces liquor potassæ. Take a drachm and gently boil in an ordinary test-tube. Next add six to eight drops—not more—of the suspected urine, and again gently boil. If sugar be present, a copious yellow, or yellowish red, precipitate is thrown down.

Microscopical Analysis.—A microscopical examination of the urine is required in cases of application for heavy amounts of insurance, or if the chemical analysis is not satisfactory ; if possible use a centrifuge ; if not available add 10 grains of salicylic acid or chloral hydrate to the urine and set in a conical glass for 24 hours until the sediment subsides. If no pathological products be found after examination of two slides the evidence may be considered conclusive in the negative.

Examination of the Nervous System.

The state of the brain and nervous system may be ascertained in a general way by noting the general appearance and expression of face. Is there any alteration of speech ? Are sentences uncertain or broken off ? Are the lips agitated ? Is the tongue tremulous ? Note any tremours or peculiarity of gait, or want of control in any particular set of muscles. The

Examiner's attention is directed to the importance of the reflexes. Is the knee jerk normal, absent, or exaggerated? Are the pupils equal and do they react to light and accommodation? It may be wise to ask the applicant to stand with eyes closed and feet together to detect any evidence of locomotor ataxia. Neuralgia, vertigo, headache, if complained of, should be most carefully investigated and the results stated. How far the abuse of narcotics, tobacco or alcohol is responsible for nervous symptoms should be present to the Examiner. Eccentricities—mental peculiarities—should be noted. Affection of the special senses, if attended with dizziness and confusion of mind, specially following accidents, are forerunners of insidious and fatal diseases of the brain. Discharges from the ear must be carefully reported, giving full details as to the severity and frequency of recurrence.

Injuries or Surgical Affections.

All severe injuries should be fully reported with as much detail as possible, and surgical operations in the same manner, to enable the Medical Directors to appreciate the gravity of the accident or operation and its bearing upon the risk.

As for example, in a case of operation for appendicitis it is necessary that the scar should be examined, its character reported upon. Is there any tenderness or dragging? Do any indications of hernial protrusion exist?

Examination of Women.

A good many Companies insure women, sometimes at the same rates as men; hence the necessity of a most careful examination being made, especially in regard to those diseases which are of vital importance and peculiar to them.

The questioning and examination to effect this will require "tact" and "judgment" on the part of the examiner; but the examiner should always insist on such a thorough exam-

ination as will satisfy him that the applicant is in every way insurable and a desirable life.

Diseases of the breast, especially cancer, which is more apt to occur about the menopause, should be looked for, as evidenced by tenderness, presence of tumors, or enlarged axillary glands. Uterus and its functions are important, cancer being there of frequent occurrence. Note if there is any evidence of prolongation of menopause beyond normal, any enlargement of abdomen in region of pelvis, etc. Is she pregnant? remembering that no application will be accepted during pregnancy. What has been the history of previous pregnancies? A special form is provided in these cases of female risks in addition to the usual examination.

Special Rules as to Double Examinations.

The rules as to double examinations for large amounts of insurance are as follows :

1. That there be two examinations of applicants desiring assurance of \$15,000 or over by the Company's Medical Examiners, one of which shall include a chemical and microscopical test of the urine, as set forth in the special form of this Company.
2. That in applications for \$10,000 and under \$15,000 one examination by the Company's Medical Examiner shall, in most cases, be deemed sufficient. It shall include a report on the chemical and microscopical analysis of the urine, as set forth in the special form of this Company.
3. That in certain cases, if it appears desirable to the Medical Directors, though the amount be under \$10,000, a similar examination may be asked for at the usual fee.
4. If it should seem advisable and yet impossible to procure such an examination and report on the urine, the specimen should be forwarded to Head Office and there dealt with as the Medical Directors think wise.

